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PATENT

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

Application No.: 10/562,035
PCT Appl. No.: PCT/CH2004/000368
Applicant: Werner BOLTSCHAUER
Filing Date: December 22, 2005
Group Art Unit: Unknown
Title: METHOD AND DEVICE FOR THE PRODUCTION OF A CAN BODY
AND CAN BODY
Docket No.: 37960-00011/US

REQUEST FOR RECORDATION OF
INTERNATIONAL PRELIMINARY EXAMINATION REPORT

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April 7, 2006

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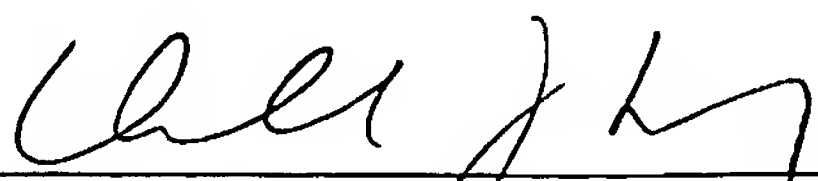
Sir:

Applicant attaches hereto an International Preliminary Examination Report which has been issued in connection with the above-identified application. Please make this document part of the prosecution history of the present application.

Respectfully submitted,

HARNESS, DICKEY & PIERCE, P.L.C.

By:


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Attachment: International Preliminary Examination Report

PCT

NOTIFICATION OF TRANSMITTAL
OF COPIES OF TRANSLATION
OF THE INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY
(CHAPTER I OR CHAPTER II
OF THE PATENT COOPERATION TREATY)
(PCT Rules 44bis.3(c) and 72.2)

To:

STOCKER, Kurt
Büchel, v.Révy & Partner
Zedernpark/Bronschhoferstr. 31
Postfach 907
CH-9500 Wil
SUISSE

Date of mailing (*day/month/year*)
23 March 2006 (23.03.2006)

Applicant's or agent's file reference
WP-1886-P/

IMPORTANT NOTIFICATION

International application No.
PCT/CH2004/000368

International filing date (*day/month/year*)
17 June 2004 (17.06.2004)

Applicant

CREBOCAN AG et al

1. Transmittal of the translation to the applicant.

The International Bureau transmits herewith a copy of the English translation of the international preliminary report on patentability (Chapter I).



The International Bureau transmits herewith a copy of the English translation of the international preliminary report on patentability (Chapter II).

2. Transmittal of the copy of the translation to the designated or elected Offices.

The International Bureau notifies the applicant that copies of that translation have been transmitted to the following designated or elected Offices requiring such translation:

None

The following designated or elected Offices, having waived the requirement for such a transmittal at this time, will receive copies of that translation from the International Bureau only upon their request:

AE, AG, AL, AM, AP, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EA, EC, EE, EG, EP, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OA, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

3. Reminder regarding translation into (one of) the official language(s) of the elected Office(s).

The applicant is reminded that, where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary report on patentability (Chapter II).

It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned within the applicable time limit (Rule 74.1). See Volume II of the PCT Applicant's Guide for further details.

The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Authorized officer

Yolaine Cussac

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Facsimile No.+41 22 338 70 80

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INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44*bis*)

Applicant's or agent's file reference WP-1886-P/	FOR FURTHER ACTION		See item 4 below
International application No. PCT/CH2004/000368	International filing date (<i>day/month/year</i>) 17 June 2004 (17.06.2004)	Priority date (<i>day/month/year</i>) 27 June 2003 (27.06.2003)	
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237			
Applicant CREBOCAN AG			

1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 *bis*.1(a).

2. This REPORT consists of a total of 17 sheets, including this cover sheet.

In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.

3. This report contains indications relating to the following items:

- | | | |
|-------------------------------------|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input checked="" type="checkbox"/> | Box No. I | Basis of the report |
| <input checked="" type="checkbox"/> | Box No. II | Priority |
| <input type="checkbox"/> | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability |
| <input type="checkbox"/> | Box No. IV | Lack of unity of invention |
| <input checked="" type="checkbox"/> | Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input checked="" type="checkbox"/> | Box No. VI | Certain documents cited |
| <input type="checkbox"/> | Box No. VII | Certain defects in the international application |
| <input type="checkbox"/> | Box No. VIII | Certain observations on the international application |

4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44*bis*.3(c) and 93*bis*.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44*bis* .2).

Date of issuance of this report
16 March 2006 (16.03.2006)

Authorized officer

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PATENT COOPERATION TREATY

Translation

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

<div style="border: 1px solid black; width: 100%; height: 100%;"></div>		Date of mailing (day/month/year)
Applicant's or agent's file reference WP-1886-P/		FOR FURTHER ACTION See paragraph 2 below
International application No. PCT/CH2004/000368	International filing date (day/month/year) 17.06.2004	Priority date (day/month/year) 27.06.2003
International Patent Classification (IPC) or both national classification and IPC		
Applicant CREBOCAN AG		

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☒ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☒ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/EP	Authorized officer
Facsimile No.	Telephone No.

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/CH2004/000368

Box No. I

Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
☐ This opinion has been established on the basis of a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material
☐ a sequence listing
☐ table(s) related to the sequence listing
 - b. format of material
☐ in written format
☐ in computer readable form
 - c. time of filing/furnishing
☐ contained in the international application as filed.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

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Box No. II

Priority

1. ☒ The following document has not yet been furnished:

☒ copy of the earlier application whose priority has been claimed (Rule 43bis.1 and 66.7(a)).

☐ translation of the earlier application whose priority has been claimed (Rule 43bis.1 and 66.7(b)).

Consequently it has not been possible to consider the validity of the priority claim. This opinion has nevertheless been established on the assumption that the relevant date is the claimed priority date.

2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43bis.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.

3. Additional observations, if necessary:

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/CH2004/000368

Box No. IV Lack of unity of invention

1. ☒ In response to the invitation (Form PCT/ISA/206) to pay additional fees the applicant has:
- ☐ paid additional fees
- ☐ paid additional fees under protest
- ☒ not paid additional fees
2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose not to invite the applicant to pay additional fees.
3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is
- ☐ complied with
- ☒ not complied with for the following reasons:

See supplemental sheet

4. Consequently, this opinion has been established in respect of the following parts of the international application:
- ☐ all parts
- ☒ the parts relating to claims Nos. 1-16, 18-21

WRITTEN OPINION OF THE
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International application No.

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Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	5, 6, 9-16, 18	YES
	Claims	1-4, 7-8	NO
Inventive step (IS)	Claims		YES
	Claims	1-16, 18-21	NO
Industrial applicability (IA)	Claims	1-16, 18-21	YES
	Claims		NO

2. Citations and explanations:

1. INDEPENDENT **CLAIM 1**:

1.1 The present application does not satisfy the requirements of PCT Article 33(1) because the subject matter of **claim 1** is not novel within the meaning of PCT Article 33(2).

1.2 Document **D1** discloses:

Method for producing a can body, in which method a closed can shell (55) with a weld seam W extending over the entire height of the can shell (55) is prepared and a closing element is arranged (page 1, last paragraph to page 2, first paragraph) on the can shell (55), wherein proceeding from a metal strip (20), a tube (51), which is closed in the circumferential direction and possibly consists of sections connecting directly to one another, is produced by means of at least one shaping step (36, 37, 38, 39, 62, 63, 64, 65, 66, 67, 68) and a welding step (40, 41), and a weld seam W in the longitudinal direction is essentially welded continuously in the welding

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Box No. V

Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement

step, and from the resulting tube (51), tube sections (52) having the length of the desired can height are further processed as can shells (55).

2. INDEPENDENT **CLAIM 18**:

2.1 The present application does not satisfy the requirements of PCT Article 33(1) because the subject matter of **claim 18** is not inventive within the meaning of PCT Article 33(3).

2.2 Document **D1**, which is considered the closest prior art, discloses a:

Device for producing a can body comprising a can shell (52, 55), which is closed with a weld seam W and has a closing element (page 1, last paragraph to page 2, first paragraph) that is fixed to one end face of the can shell (55), wherein the device comprises a feeding arrangement (21) for feeding a metal strip (20), at least one shaping device (36, 37, 38, 39, 62, 63, 64, 65, 66, 67, 68) for shaping the metal strip (20) into the shape of a closed tube (51), consisting as necessary of sections that connect directly together, a welding device (40, 41) for the essentially continuous welding of the shaped tube, and a separating device (50, 78), which permits separation of the closed can shell (52, 84) from the tube (51).

Claim 1 thus differs from **D1** by:

Box No. V

Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement

(i) A device for sealingly connecting the can shell to a closing element that can be fixed to an end face of the can shell.

The subject matter of **claim 1** is thus novel (PCT Article 33(2)).

2.3 Proceeding from **D1**, the problem can be considered that of providing the can shell with one or more closing elements.

With regard to feature (i), document **D2** discloses in figure 9 the fixing of closing elements (60, 61) to a can shell (42). To solve the problem of interest, a person skilled in the art would apply the features known from **D2** (figure 9) in the device known from **D1** without thereby performing an inventive step.

Claim 18 is therefore not considered inventive (PCT Article 33(3)).

3 INDEPENDENT **CLAIM 21**:

3.0 **Product claim 21** refers back to the method according to **claim 1**. This back-reference is unclear because in the present case the intended restrictions on the product remain unclear solely because of the reference back to the method (PCT Article 6). The corresponding features of the characterizing part of **claim 21** are therefore considered optional in the following report.

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Box No. V

Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement

3.1 The present invention does not satisfy the requirements of PCT Article 33(1) because the subject matter of **claim 21** is not novel within the meaning of PCT Article 33(2).

3.2 Document **D2** discloses a:

Can body (figure 9) with a can shell (42) closed by means of a weld seam (46) and a closing element (60, 61) that is fixed to the end face of the can shell (42).

4 DEPENDENT **CLAIMS 2 TO 16:**

Claims 2 to 16 do not contain any features which, in combination with the features of any claim to which they refer back, meet the PCT requirements for novelty and inventive step.

4.1 **CLAIM 2:**

D1 (figure 1) discloses that at least one of the following features is provided:

- a) the weld seam W is formed on a flattened tube (see figures 5 and 10)
- b) the resulting tube is flattened (figures 13, 14) and tube sections (51, 84) are separated (50) from the flattened tube,
- d) the weld seam W is configured as a blunt, spliced connection.

Box No. V

Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement

4.2 **Claim 3:**

D1 discloses that the metal strip (20) is moved longitudinally through a shaping device (36, 37, 38, 39, 62, 63, 64, 65, 66, 67, 68) and to a welding device (40, 41) to form the tube (51), wherein the shaping device continuously shapes the metal strip (20) such that the two side edges come into contact with each other (figures 1 and 5) and the welding device connects these side edges with a weld seam W.

4.3 **Claim 4:**

In view of the prior art according to **D1**, the additional features of claim 4 do not provide any additional or unpredictable technical effect. The use of a laser (15) for welding the tube is known from **D3** (figure 1).

4.4 **Claim 5:**

D4 (figure 3) discloses that a label is attached to the outside of the can body after the shaping and welding.

4.5 **Claim 6:**

In view of the prior art according to **D1**, the additional features of claim 5 do not provide any additional or unpredictable technical effect.

Box No. V

Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability:
citations and explanations supporting such statement

4.6 **Claim 7:**

D1 discloses that a cutting process is carried out with a cutting edge (78) in order to separate (50) tube sections (52, 84), but the cutting edge is preferably permanently located and the tube (51) can bend (figures 1 and 16) in a bending region during the fixing by the cutting edge (78) in order to accommodate the restrained forward feed as a bending elongation in the deflection region.

4.6 **Claim 8:**

D1 (figures 15 and 17) discloses that slits (24), which are arranged in curved areas (44) between flat regions (46, 47) after the shaping and flattening, are formed on the flat metal strip (20), the cutting process being carried out in the flat regions (46, 47) between the slits (24).

4.7 **Claims 9 to 16:**

In view of the prior art according to D1 and D2, the additional features of these claims, which involve further shaping of the can body and the attachment of closing elements, especially for aerosol cans, do not provide any additional or unpredictable technical effects.

4.8 **Claim 19:**

D1 discloses that the shaping device (36, 37, 38,

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Box No. V	Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability: citations and explanations supporting such statement
	<p>39, 62, 63, 64, 65, 66, 67, 68) continuously shapes the metal strip (20) about an axis running parallel to the metal strip such that the two side edges come into contact with each other and the welding device (40, 41) connects these side edges with a weld seam W, and the separating device (50) preferably comprises a cutting edge (78), which in particular is permanently located and the tube (51) can bend (figures 1 and 16) in a bending region during the fixing by the cutting edge (78) in order to accommodate the restrained forward feed as a bending elongation in the bending region.</p> <p>4.9 Claim 20:</p> <p>D1 discloses that the welding device (40, 41) is configured and arranged in such a manner that it makes the weld seam W weldable on a flattened tube (see figures 1, 5 and 10).</p> <p>5 The subject matter of claims 1 to 16 and 18 to 21 is doubtlessly industrially applicable (PCT Article 33(4)).</p>

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of:

Box IV

1. This report makes reference to the following documents:

D1: DE-A 1 452 556

D2: EP-A 0 208 564

D3: US-A 4 341 943

D4: EP-A 1 153 837

This Authority has determined that this international application contains multiple inventions or groups of inventions that are not linked by a single general inventive concept (PCT Rule 13.1), namely:

I: Claims 1 to 16, 18-21:

Production of a can body by forming a metal strip into a tube with a longitudinal weld seam, wherein a closing element is fixed on the can shell thus produced.

II. Claim 17:

Creating a narrowing on the open face of a can body.

III. Claims 22 to 23:

Can body with a closed can shell and a closing element that is fixed to the end face of the can shell.

The search yielded the following prior art

Supplemental Box

documents that are relevant to the assessment of
unity of invention:

D1: DE-A 1 452 556

D2: EP-A 0 208 564

Document **D1** discloses a:

method for producing a can body, in which method a
closed can shell (55) with a weld seam W extending
over the entire height of the can shell (55) is
prepared and a closing element (page 1, last
paragraph to page 2, first paragraph) is arranged
on the can shell, wherein proceeding from a metal
strip (20), a tube (51), which is closed in the
circumferential direction and possibly consists of
sections connecting directly to one another, is
produced by means of at least one shaping step
(36, 37, 38 39) and a welding step (40, 41), and a
weld seam in the longitudinal direction is
continuously welded in the welding step (40, 41),
and from the resulting tube (51), tube sections
(52) having the length of the desired can height
are further processed as can shells (55).

The subject matter of independent **claim 1** is
therefore known. This means that all of the
features that link the claims of group I are
likewise known. Group I thus does not have any
special technical features.

Document **D2** discloses a:

Supplemental Box

Can body (figure 9) comprising a closed can shell (42) and a closing element (60) fixed to the end face of the can shell (42).

Thus, all features that link the claims of group III to each other are also known. Group III thus likewise does not have any special technical features.

The problems solved by groups I and III are implicitly present in documents **D1 and D2**. At most, group II solves a technical problem. It follows that the problems addressed by the groups of inventions are different and, in the case of groups I and III, are even known from the prior art.

Furthermore, an examination of the question of whether there possibly exist common special technical features through a technical effect results in the following findings:

Group I: This group of inventions solves the problem of can production by means of a shaping step in which a continuously fed metal strip is shaped into a tube by a shaping step and then welded with a longitudinal weld seam.

Group II: This group solves the problem of creating a narrowing on an already existing can body.

Supplemental Box

matter of a search. No further request to pay additional fees would occur. The reason is that PCT Article 17(3) specifies that the ISA is supposed to produce the international search report for those parts of the international application that relate to the invention first mentioned in the claims ("main invention") and for those parts that relate to the inventions and for which additional fees were paid. Neither the PCT nor the PCT Guidelines provide a legal basis for further requirements to pay additional search fees (W17/00, item 11 and W1/97, items 11-16).

Supplemental Box

Group III: This group solves the problem of creating a closing element to a can body.

There is likewise no corresponding technical effect present in the groups of inventions. Thus it follows that a technical relationship that forms a single general inventive concept cannot be established either on the basis of the problem addressed by the respective invention or on the basis of the solutions defined by the special technical features of each invention.

Thus unity of invention as per PCT Rules 13.1 and 13.2 is not present among the aforementioned groups of claims, either in regard to the special technical features or in regard to the solved problems.

The application relates to a large number of inventions or groups of inventions within the meaning of PCT Rule 13.1. These were subdivided, as described above. If the applicant pays additional fees for one (or more) group(s) of inventions not yet searched at this time, the additional search(es) could discover another prior art that proves another lack of unity "a posteriori" within one (or more of the) group(s) not yet searched. In this case, only the first invention within (each of these / this) group(s) of inventions for which a lack of unity of invention is established will become subject